

## A new workflow for untangling large-scALE parameter studies

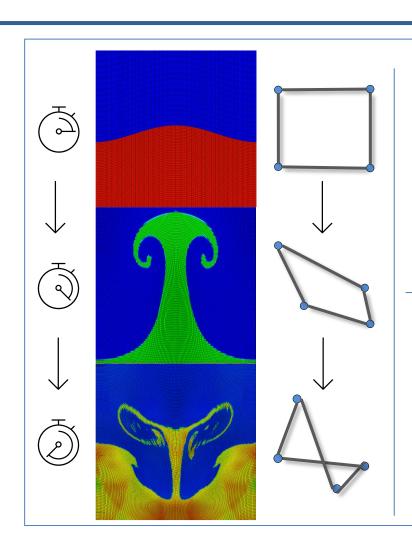
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## ML is currently used in Arbitrary Lagrangian-Eulerian (ALE) simulations for combatting pesky mesh tangles

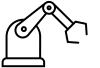




Various "mesh relaxation" strategies are used to avoid these tangles



**Hand Tuned** 



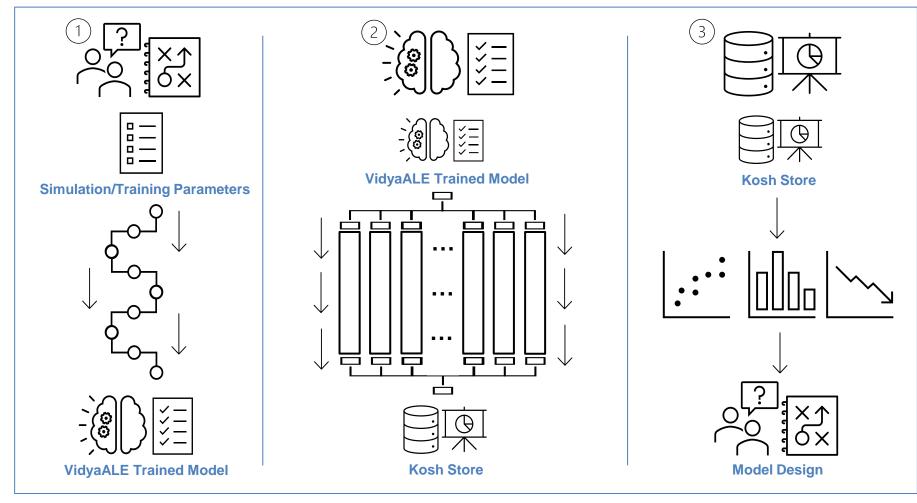
**Trained Models** 



How well do our current ML models generalize?

## Our proposed workflow enables large-scale parameter studies for investigating our ML model performance





## Investigating ML based mesh relaxation strategies allows us to see how well our ALE simulations match reality



